Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-29 (Cancelled)

- 30. (currently amended) A composite (M) comprising:
- a) at least 75 vol% of a mixed electronic/oxygen O²⁻ anionic conducting compound (C₁) chosen from doped ceramic exides which, at the use temperature, are in the form of a crystal lattice having oxide ion vacancies and more particularly in the form of a cubic phase, fluorite phase, aurivillius type perovskite phase, brown-millerite phase or pyrochlore phase, compound (C₁) being a perovskite compound of formula:
 - La_(1-x-u)Sr_xAl_uFe_(1-v)Ti_vO_{3-δ}
 - La_(1-x-u)Sr_xAl_uFe_(1-v)Ga_v O_{3-δ}
 - 3) $La_{(1-x)}Sr_xFe_{(1-y)}Ti_yO_{3-\delta}$,
 - La_(1-x)Sr_xTi_(1-y)Fe_y O_{3-δ},
 - 5) La_(1-x)Sr_xFe_(1-v)Ga_vO_{3-δ} or
 - 6) $La_{(1-x)}Sr_xFeO_{3-\delta}$

where:

- $0 < x \le 0.5$:
- $0 \le u \le 0.5$;
- $(x + u) \le 0.5$;
- $0 \le y \le 0.9$:
- $0 \le v \le 0.9$:
- $0 \le (y + v) \le 0.9$; and

w is such that the structure in question is electrically neutral; and

- b) from 0.01-to-25-vol% at least 0.1 vol% but not more than 10 vol% of a compound (C_2) , different from compound (C_1) , chosen from ceramics of oxide type, seramics of nonoxide type, metals, metal alloys or mixtures of these various types of materials chosen from oxide-type materials, calcium oxide (CaO), aluminum oxide (Al_2O_3) , zirconium oxide (ZrO_2) , titanium oxide (TiO_2) , mixed strontium aluminum oxides $SrAl_2O_4$ or $Sr_3Al_2O_6$, mixed barium titanium oxide $(BaTiO_3)$, mixed calcium titanium oxide $(CaTiO_3)$, $La_{0.5}$ $Sr_{0.5}$ $Fe_{0.9}$ $Ti_{0.1}$ $O_{2.5}$ or $La_{0.6}$ $Sr_{0.4}$ $Fe_{0.9}$ $Ga_{0.1}$ $O_{2.5}$; and
- c) from 0 vol% to 2.5 vol% of a compound (C₃) produced from at least one chemical reaction represented by the equation:

$$xF_{C1} + yF_{C2} \rightarrow zF_{C3}$$

in which equation F_{C1} , F_{C2} and F_{C3} represent the respective crude formulae of compounds (C_1) , (C_2) and (C_3) and x, y and z represent rational numbers greater than or equal to 0.

- 31. (currently amended) The composite of claim 30, in which [[the]] grains of compound (C_2) have an equiaxed shape with a diameter ranging from 0.1 μ m to 5 μ m and preferably less than 1 μ m.
- 32. (Previously presented) The composite of claim 30, in which the volume fraction of compound (C_3) does not exceed 1.5% and more particularly does not exceed 0.5% by volume.
- 33. (Previously presented) The composite of claim 32, in which the volume fraction of compound (C_3) in the composite tends toward 0.
- 34. (canceled)
- 35. (Previously presented) The composite of claim 34, in which the volume fraction of compound (C₂) does not exceed 5%.

- 36. (canceled)
- 37. (withdrawn) The composite of claim 30, in which compound (C₂) is chosen from materials of the nonoxide type and preferably from silicon carbide (SiC), boron nitride (BN), nickel (Ni), platinum (Pt), palladium (Pd) and rhodium (Rh).
- 38. (canceled)
- 39. (canceled)
- 40. (canceled)
- 41. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IIa):

$$La_{(1-x-u)}Ma'_xMa"_uMb_{(1-y-v)}Mb'_yMb"_vO_{3-\delta}$$
 (IIa),

corresponding to formula (II), in which Ma represents a lanthanum atom.

42. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IIb):

$$Ma_{(1-x-u)}Sr_xMa_u^*Mb_{(1-y-y)}Mb_y^*Mb_v^*O_{3-\delta}$$
 (IIb),

corresponding to formula (II) in which Ma' represents a strontium atom.

43. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IIc):

$$Ma_{(1-x-u)}Ma'_xMa"_uFe_{(1-y-v)}Mb'_yMb"_vO_{3-\delta}$$
 (IIc),

corresponding to formula (II) in which Mb represents an iron atom.

44. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IId):

$$La_{(1-x)}Sr_xFe_{(1-v)}Mb"_vO_{3-\delta}$$
 (IId),

corresponding to formula (II) in which u = 0, y = 0, Mb represents an iron atom, Ma represents a lanthanum atom and Ma' represents a strontium atom.

- 45. (canceled)
- 46. (currently amended) The composite of claim [[45]] 30, of formula:
 - a) La_{0.6} Sr_{0.4} Fe_{0.9} Ga_{0.1} O_{3-δ}, or
 - b) La_{0.5} Sr_{0.5} Fe_{0.9} Ti_{0.1} O_{3-δ}.
- 47. (canceled)
- 48. (canceled)
- 49. (canceled)
- 50. (new) The composite of claim 30, wherein compound (C2) is MgO.